THROMBOCYTOPENIA IN POST COVID ERA: PUZZLE IN THE DIAGNOSIS

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World Health Organization declared the outbreak of coronavirus disease 2019 (COVID-19) a pandemic on March 11, 2020, researchers and clinicians have worked diligently to learn everything about the disease that has resulted in over 240 million cases and nearly five million deaths worldwide. While most patients who become infected with COVID-19 recover without complications, some patients develop sequelae. One such complication of COVID-19 is immune thrombocytopenia. Immune thrombocytopenia is caused by autoantibodies against platelet antigens, resulting in thrombocytopenia. In the acute setting, ITP appears abruptly, often one to two weeks after a self-limiting Immune thrombocytopenia has been reported in COVID-19 patients. The mechanism of ITP is unclear but can be attributed to the underlying immune dysregulation in COVID-19, leading to the production of antiplatelet antibodies that destroy circulating platelets and megakaryocytes in the bone marrow. The onset of ITP in COVID-19 patients occurs anytime during the disease. However, 20% of ITP cases in a systematic review occurred three weeks after the onset of COVID-19 symptoms, with many occurring after clinic recovery. In some patient, ITP was an incidental finding five weeks after COVID-19 infection and after complete clinical recovery. Different studies revealed about 30% to 40% of COVID-19 ITP patients were asymptomatic. When symptomatic, the commonest symptoms have been cutaneous bleeding, followed by epistaxis. However, severe bleeding, including intracranial hemorrhage and death resulting from hemorrhage, has been reported. Thrombo-cytopenia in post Covid era so common, difficult to diagnosis and even very much challenging to treat some cases. Though ITP is a diagnosis of exclusion and is diagnosed in patients presenting with thrombo-cytopenia in which other possible causes of thrombocytopenia have been excluded and assessment of response to treatment. The American Society of Hematology (ASH) recommends testing adults newly diagnosed with ITP for HIV, and hepatitis C. Further investigations are required if there are other abnormalities in the blood count or smear other than thrombocytopenia. Bone marrow biopsies are usually not required in patients presenting with typical ITP. However, in COVID-19 patients who received heparin prophylaxis, heparin-induced thrombocytopenia (HIT) should be excluded. Patients with HIT usually have moderate thrombocytopenia with a platelet count above $50x10^3$/ml and rarely develop severe thrombocytopenia (<$20x10^3$/ml) unless in cases of fulminant thrombosis or consumptive coagulopathy. HIT can be ruled out using antiplatelet factor 4 (PF-4) or serotonin release assay test where available. Furthermore, HIT can be excluded using the 4Ts score, which incorporates the severity of thrombocytopenia, the timing of thrombocytopenia to the onset of heparin use, complication of thrombosis, and exclusion of other causes of thrombocytopenia. HIT can reliably be excluded with a low 4Ts score (d”3) because of its high negative predictive value.Treatment of ITP is dependent on the platelet count and whether the patient is bleeding. The goal of treatment is to treat or prevent significant bleeding in patients. Patients with critical bleeding causing hemodynamic instability or those who bleed into critical anatomic sites like the brain or spine require platelet transfusion and intravenous immune globin (IVIG), and glucocorticoid.In adults with a platelet count <$30x10^3$/ml who are symptomatic or with minor mucocutaneous bleeding, the American Society of Hematology (ASH) recommends using corticosteroids as the first-line. However, IVIG may be used as first-line therapy if corticosteroids are contraindicated. Conversely, observation without treatment is recommended in newly diagnosed ITP patients with platelets e”$30x10^3$/ml who are asymptomatic or with minor mucocutaneous bleeding. If corticosteroids are used, the ASH guideline suggests either prednisone (0.5-2.0 mg/kg per day for d”six weeks) or dexamethasone (40 mg per day for four days) for initial therapy. Similarly, if IVIG is used, the initial dose is 1 g/kg as a one-time dose, repeated if necessary.Thrombocytopenia predisposes patients to fatal bleeding events. Therefore, the presence of thrombocytopenia or bleeding in post-COVID patients should raise suspicions of ITP. Early recognition during routine follow-up could lead to prevention and better outcomes. Clinical awareness required about potentially life-threatening ITP secondary to COVID-19.

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